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10/533,349	01/06/2006	Thomas Farrell	05-349	7212

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EXAMINER

CHARIOUI, MOHAMED

ART UNIT	PAPER NUMBER
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2857

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07/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,349	Applicant(s) FARRELL ET AL.	
	Examiner Mohamed Charioui	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15,17,19 and 22-28 is/are rejected.
- 7) ☒ Claim(s) 16,18,20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant cancelled claims 1-14.

DETAILED ACTION

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Claim 17 attempts to further limit claim 15 "further comprising setting a gain current of the laser...", however, since no current is mentioned in claim 15, it is unclear to one having ordinary skill in the art what steps claim 17 is attempting to further limit. This indicates a gap in between the steps.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 25-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Broberg et al. (U.S. Patent No. 6,504,856).

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Broberg et al. teach monitoring transitions between two operating points of a laser while varying currents of a second of the two operating points (see col. 3, line 61 to col. 4, line 17 and col. 2, line 66 to col. 3, line 20); determining when a transition from a first wavelength to an operating point about the second does not correspond to a wavelength of the second operating point and then applying a fail status to this transition (see col. 6, lines 31-39; col. 6, lines 43-51; and col. 7, lines 1-11); and using a location of a nearest failed operating point about the second operating point to provide a vector of the degradation of the laser to compensate for the performance of the laser by adjusting the operation points (see col. 7, lines 11-34).

Regarding computer readable medium (claims 27 and 28) (see col. 4, line 65 to col. 5, line 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broberg et al. in view of Tsunekane et al. (U.S. Pub. No. 2002/0126724)

As per claims 15, 23 and 24, Broberg et al. teach performing a first set of initial measurements on the laser to provide a reference set of measurements

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corresponding to a performance of the laser, performing a second set of measurements on the laser where some degradation has occurred (see col. 3, line 61 to col. 4, line 14), and effecting a comparison of the first and second set of measurements so as to provide a measure of the degradation in the laser (see col. 4, lines 23-35; col. 6, lines 8-14; and col. 6, lines 31-39).

Broberg et al. do not explicitly teach that the reference set of measurements corresponding to a performance of the laser when no degradation has occurred.

Tsunekane et al. teach this feature (see paragraph [0070]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Tsunekane et al.'s teaching into Broberg et al.'s invention because the measurement would be used to determine degradation in the tunable laser. Therefore, appropriate actions would be taken to prevent severe damage of the tunable laser.

Regarding a computer readable medium (claims 23 and 24) (see Broberg et al., col. 4, line 65 to col. 5, line 2).

As per claim 19, Broberg et al. further teach comparison of the first set of measurements with the second set of measurements is carried out by comparing wavelength or etalon responses of the degradation of the device that are measured (see col. 6, lines 31-39 and col. 6, lines 51-60).

As per claim 22, Broberg et al. further teach locating a subset of mode jumps from the first measurement set; and re-measuring a region around each of

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the mode jumps in the same manner as the first set of measurements (see col. 4, lines 6-14 and col. 4, lines 30-35).

Allowable Subject Matter

5. **Claims 16, 18, 20 and 21** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 16 and 18, none of the prior art of record teaches or suggests measuring an output power/etalon/wavelength of the laser while current of one tuning section is increased and while currents in all other tuning sections are set to zero, in combination with the rest of the claim limitations.

Regarding claims 20 and 21, none of the prior art of record teaches or suggests that positions of mode jumps in the two sets of measurements are compared and a transform is obtained and wherein mode jumps from the second set of measurements are transformed to the same currents as corresponding mode jumps determined from the first measurement, in combination with the rest of the claim limitations.

Response to Arguments

6. Applicant's arguments with respect to claims 15-28 have been considered but are moot in view of the new ground(s) of rejection.

Prior art

7. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Sekiya et al. ['686] disclose optical transmitter.

Crowder ['693] discloses power and wavelength control of sampled grating distributed Bragg reflector laser.

Roberts ['692] discloses optical fibre transmission system.

Carrick ['459] discloses extinction ratio calculation and control of a laser.

Saunders et al. ['217] disclose method of adaptive signal degradation compensation.

Contact information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571) 272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

7/19/07


JEFFREY R WEST
EXAMINER - AU 2857